OPTICAL RETARDATION FILM AND ITS CONTINUOUS MANUFACTURING METHOD

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Abstract of **JP2001215332**

PROBLEM TO BE SOLVED: To develop an optical retardation film with <=80 nm optical retardation and its stable and efficient manufacturing method with little variation in an orientation angle.
SOLUTION: The optical retardation film is composed of a norbornene type polymer film. When its refractive indexes in the plane are expressed as nx, ny and that in the thickness direction is expressed as nz, inqualities nx>=ny>nz hold. The product of the difference of its refractive indexes between the two directions arbitrarily selected and the film thickness is <=80 nm and Nz, defined by a formula (nx-nz)/(nx-ny), is 1-4. Its continuous manufacturing method comprises a step uniaxially stretching a long-length film composed of the norbonene type polymer at a temperature >=30 deg.C higher than the glass transition temperature of the polymer 1.1-3 times its length in the width direction. Consequently the optical retardation film is obtained which is with low retardation, is excellent in heat resistance and is capable of highly precisely compensating variation of display characteristics due to the viewing angle of the liquid crystal cell.